A7350-1.17F 1186

•business flying

NATIONAL BUSINESS AIRCRAFT ASSOCIATION, INC.

1985—Section 2

Business Aviation's Age of Discontinuity

From the Remarks of
John H. Winant,
President, National Business Aircraft Association

at the
1985 Annual Meeting,
Aircraft Finance Association

Coronado, California
November 21, 1985

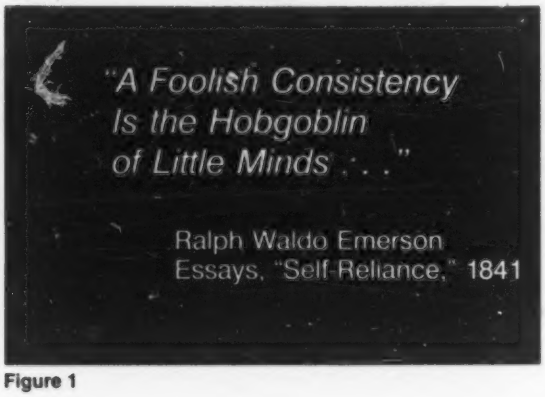

Figure 1

In late 1983 I made a detailed and optimistic statement about business aviation's near-term future. It centered on my belief that a steep two year decline in sales of new business aircraft was nearing its end.

The basis for my statement were trends in economic data which had been reliable signposts through several business cycles over an extended period of years. By mid-1983 significant upward movement of several key statistics signalled change.

Total after-tax profits in the United States, which had dropped sharply from 1979 through 1982, were on a steep rebound to $127.8 billion dollars in 1983. The prime interest rate had fallen from more than 20 per cent to 12 by late 1983, almost halving the cost of money. Fuel prices had risen at unprecedented rates through the 1970's but by 1983 had levelled off to a less than one per cent per year advance.

All the pieces seemed to be comfortably and properly placed in the tableau. The overture celebrated a major new act in the unfolding drama of business aviation. But even now, two years later, the curtain has yet to rise. My bold predictions have never been fulfilled.

Sales of new aircraft have continued to plummet while the traditional signposts have steadfastly pointed in the opposite direction. Obviously, some or perhaps all the old reliable indicators no longer govern the game. At the least they have been overcome by stronger countervailing forces.

Nature teaches us that circumstances and conditions change. We learn that things are transitory. Reflecting thus on the perplexing state of business aviation, I went recently to my bookcase to find again something which Ralph Waldo Emerson had said, something which vaguely lingered in memory. **(Figure 1)** Emerson went on to say that foolish consistency was "adored by little statesmen and philosophers and divines." Had aviation industry executives existed then would he have included them? I hope not. I'd prefer to think he would have been mindful of us as he offered additional advice: "Speak what you think now in hard words and tomorrow speak what tomorrow thinks in hard words again, though it contradict everything you said today."

So, putting aside those traditional economic signposts as having only thin application today, I shall speak what I now think as we review the recent past and present and look toward the future. While most of these remarks per-

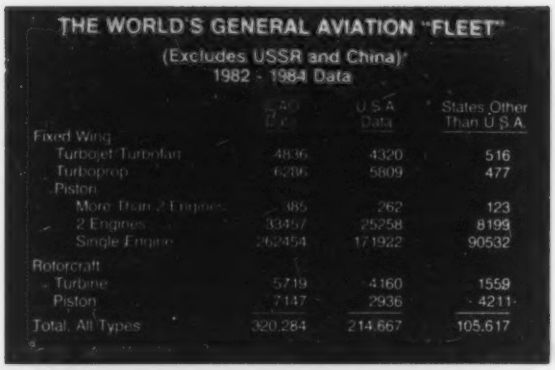

Figure 2

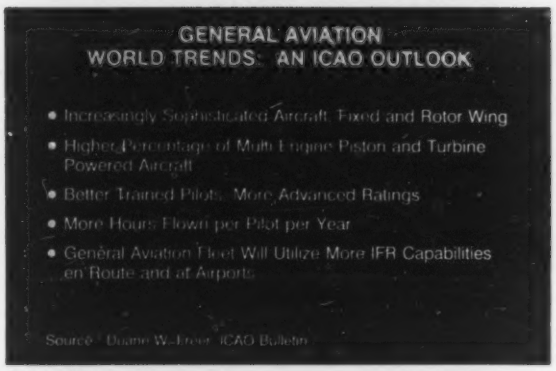
GENERAL AVIATION
WORLD TRENDS - AN ICAO OUTLOOK
• Increasingly Sophisticated Aircraft, Fixed and Rotor Wing
• Higher Percentage of Multi Engine Piston and Turbine Powered Aircraft
• Better Trained Pilots, More Advanced Ratings
• More Hours Flown per Pilot per Year
• General Aviation Fleet Will Utilize More IFR Capabilities en Route and at Airports
Source: Duane W. Freer, ICAO Bulletin

Figure 3

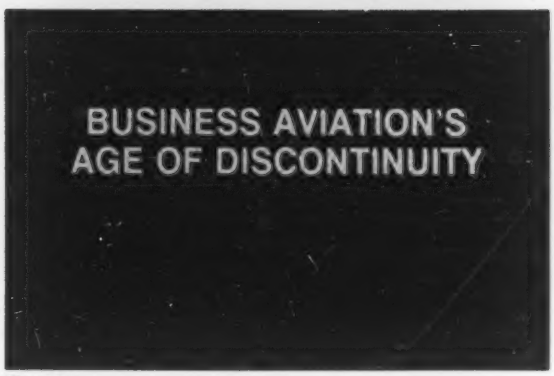

Figure 4

tain to business aviation, let's begin with a look at the whole world of general aviation as it currently exists. **(Figure 2)** Data published recently in the ICAO Bulletin provide a portion of the statistics shown here, to which I've added FAA data on the United States. Albeit the ICAO and FAA data do not cover precisely the same year, the picture is nevertheless accurate within reasonable tolerance.

These data show us that 89 per cent of the world's general aviation turbojet/turbofan fleet is registered in the United States; such is the case with 92 per cent of turboprops, 75 per cent of piston twins and 65 per cent of piston single engine aircraft. It works out the 67 per cent of the total world general aviation airplane fleet is U.S. registered. American predominance is not nearly so strong among rotorcraft. Worldwide energy exploration with its heavy reliance on rotorcraft for transportation and service may be the reason.

The ICAO article in which some of these data appeared was written by Duane Freer, Director of the ICAO Bureau of Air Navigation. He reached **(Figure 3)** these conclusions concerning general aviation's growing importance in the world aviation community.

I believe that the conclusions are credible and that all of us present today would agree with them. The main point is that these prophesies, particularly as they apply to the business aviation segment, will not necessarily be fulfilled in accordance with the old omens. Somewhere between the late 1970's and today a new set of conditions has emerged. It is largely the product of events and stimuli unforeseen less than a decade ago. Coupled to shifting political and legislative uncertainties these various elements have created what **(Figure 4)** I term business aviation's Age of Discontinuity. As defined in the Oxford English Dictionary, discontinuity means "lacking continuity in time or space," as "having interstices or breaks," and "being intermittent." Each of these aptly describes the ups and downs of business aviation during the several past years. Uncertainty is the principal result. Things never move forward when uncertainty reigns. **(Figure 5 next page)** October, 1978 witnessed passage of President Carter's "tax cut" plan which made permanent the investment tax credit. This proved to be a major incentive to purchase of business aircraft.

In the same month, the airline deregulation act was signed into law, with the aim of encouraging competition, of lowering air fares and of expanding service. Deregulation posed challenges to business aviation, but it presented even more and greater opportunities as airlines decreased or eliminated service to many smaller cities.

The year 1979 brought a brief but sharp business recession, with profits declining 12 per cent. Some of the business aviation gains were wiped out.

1981 and 1982 brought a much deeper and longer recession, with a decline of 30 per cent in profits. Many business aircraft "positions" on production lines were cancelled. It became evident that a large number of orders placed in 1980 and 1981 were never seriously intended to be fulfilled. Business aircraft in those cases had become commodities to be traded on paper, rather than tools of transportation.

The 1981 tax act provided a further purchase incentive

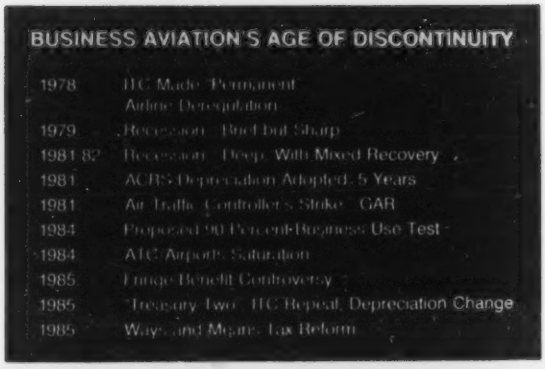
BUSINESS AVIATION'S AGE OF DISCONTINUITY
1978 ITC Made Permanent
Airline Deregulation
1979 Recession - Brief but Sharp
1981-82 Recession - Deep, With Mixed Recovery
1981 ACRS Depreciation Adopted, 5 Years
1981 Air Traffic Controller's Strike - GAR
1984 Proposed 90 Percent Business Use Test
1984 ATC Airports Saturation
1985 Fringe Benefit Controversy
1985 "Treasury Two" ITC Repeal, Depreciation Change
1985 Ways and Means Tax Reform

Figure 5

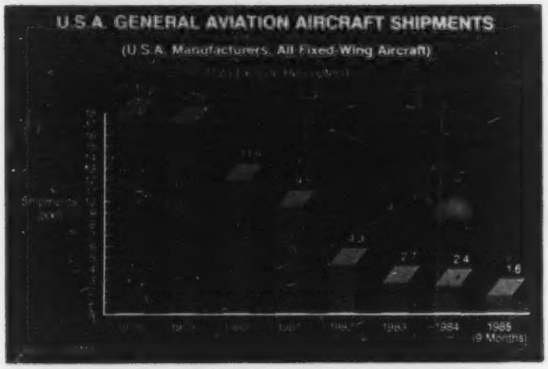

Figure 6

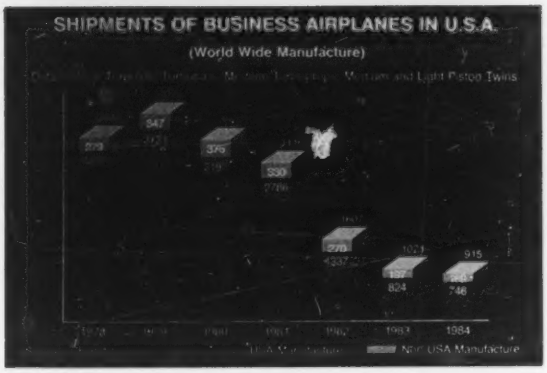

Figure 7

in that it reduced depreciation, under ACRS—the Accelerated Cost Recovery System—from seven years to five. This new incentive was not sufficient, however, to stem what soon became an unprecedented slide in aircraft purchases. A much more important event was the air traffic controller strike of August, 1981, bringing with it loss of flexibility in the use of business aircraft. The General Aviation Reservation system (GAR) was created to provide orderly use of a severely constrained system. The GAR worked. But in spite of its equity and fundamental fairness it could not permit demand-based use of the airways.

Looking back, the damage done to business aviation appears to have been of a magnitude unprecedented in history. The effects still linger. While much of the economy rebounded from the recession, the business aircraft manufacturing industry did not. Additional blows came in the form of a proposal, made in January, 1984, which would have required an aircraft to be used 90 per cent of the time for business purposes in order to qualify for business deduction. The summer and fall of 1984 witnessed a traumatic degree of saturation and delay in the nation's airport and air space system. Of a scale never before experienced, delays peaked in October at 1,600 per day. The dampening effects these delays had on use of business aircraft were one further deterrent to purchase decisions.

The year 1985 has brought three more uncertainties to the fore: The proposed imposition of punitive taxable income imputation for personal use of business aircraft and for travel in otherwise "empty" seats, the Administration's proposals to eliminate investment tax credits and to supplant ACRS with a much more stringent CCRS—Capital Cost Recovery—system. The tax exempt status of many municipal bonds, on which airports rely for major development projects, was also put in jeopardy. And finally, the Ways and Means Committee has gone to work on its own version of "tax-reform," compounding the air of uncertaintly surrounding national tax policy on capital asset acquisition and use.

Let's look briefly at how the sale of new aircraft reacted to this rapid-fire, shifting, uncertainty-breeding series of events during the Age of Discontinuity **(Figures 6–11)**: Taken cumulatively, the 1978-1984 delivery data on newly manufactured aircraft tell a depressing story. Viewed in isolation from other important factors they could lead one to the erroneous belief that the maturation of business aviation in the late 1970's has ended and that the terminal period of decline is under way, leading to decay. Government attitudes hasten such a belief.

Depicted in **(Figure 6)** are shipment data on U.S. manufactured general aviation aircraft (fixed wing) for the period 1978 through the first nine months of 1985. The year 1978 witnessed an all-time peak of 17,800 units. Since then there has been a steep and continuous slide and the indications are that 1985 will be the worst year ever recorded for U.S. production.

In **(Figures 7 through 11)** data on 1978–1984 world wide production of aircraft commonly used in business aviation are depicted. The data in all cases show shipments of units to purchasers in the United States and breaks the totals into those aircraft produced in this

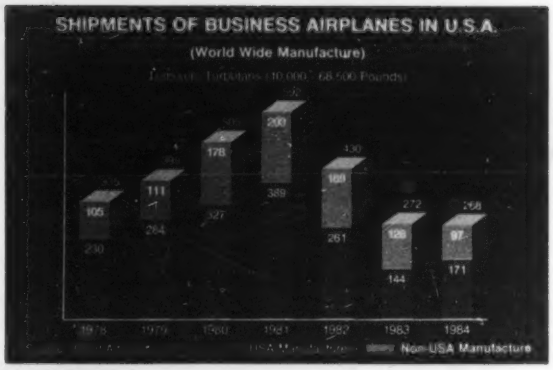

Figure 8

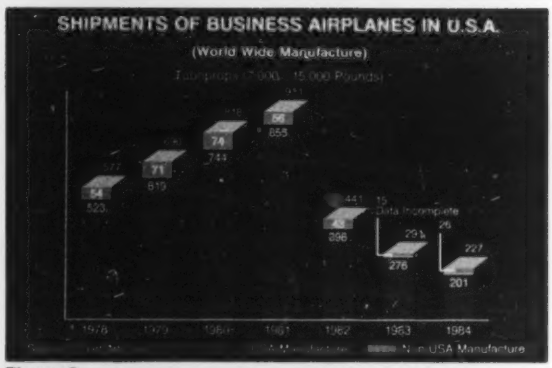

Figure 9

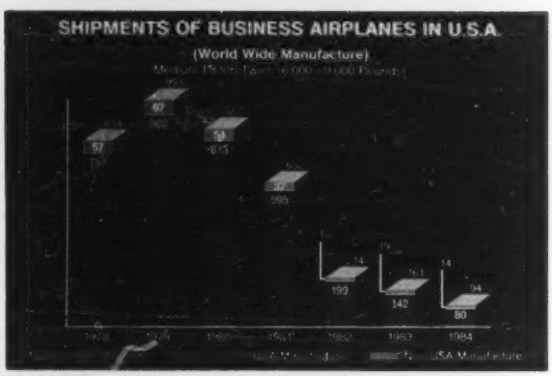

Figure 10

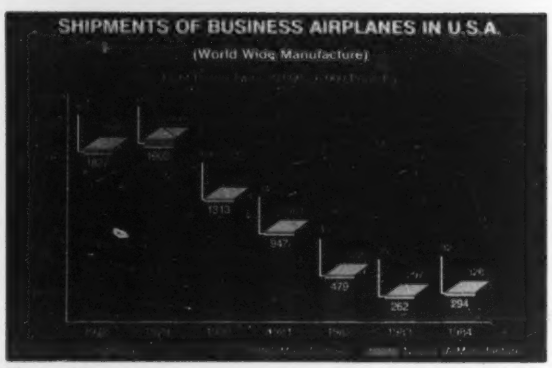

Figure 11

nation and those produced elsewhere. The first depiction **(Figure 7 page 3)** deals with an aggregation of the several types of aircraft involved: turbojets/turbofans, medium turboprops, and medium and light piston twins. Note in this illustration that the peak year was 1979, one year later than that for total general aviation aircraft. This depicts single engine equipment as the first to feel the impact of the iong decline.

The top of the line is shown in **(Figure 8)** and note should be taken that the peak year for turbojets and turbofans was not until 1981, when 592 shipments were recorded in the United States. The current rate is at less than half of the peak; additional note should be taken of the rising percentage of offshore production in a shrinking market.

(Figure 9) tells us that the steep decline in medium turboprop shipments began in 1981 and while there are small gaps in data for 1983 and 1984 the record for these years is conclusively depressing. Offshore production does not account for a significant share of the turboprop shipments shown here.

(Figure 10 and 11) show the story for medium and light piston twin aircraft. In both cases the decline in shipments was extremely steep for the period and as was the case with turboprops, offshore production was not of significant size.

Here, hovever **(Figure 12)** is a different snapshot of business aviation: data on the total active fleet for the years 1983 and 1984. The growth rate in the "high" or sophisticated aircraft portion of the fleet has slowed during this period, which is obvious from the new aircraft delivery data depicted earlier. Fleet growth in 1984 is centered principally among piston, single-engine aircraft, indicating a shift primary mission among used aircraft. The important news in this table is that there were more than 63,000 aircraft in business use in this nation last year and that hours flown were almost 11.5 million. Business aviation is alive and while it has aches and pains they are not symptoms of morbidity. **(Figure 13)**

Before moving to conclusions let's consider factors which show that business aviation is, after all, vigorous and strong, albeit older and wiser than in the heady days of 1979 to 1981.

The market for used aircraft is a busy place. Traditionally it accounts for about 60 per cent of turbine aircraft sales. It now accounts for 80 per cent. Data on specifics are impossible to track with precision. Those who follow the market closely, however, believe that while no significant changes lie immediately ahead, substantial shrinkage in the number of available good used aircraft may take place in 1986.

In terms of impact on NBAA's membership a very large proportion of new members joining in Fiscal 1985 and 1986 are owners of used aircraft, some of which are no longer in manufacture. I see this as a positive sign: it says that there are new corporate citizens in the business aviation community, citizens who have made their first-ever aircraft choice and have begun with an attractively priced, high quality used airplane. These companies are excellent candidates for upgrade to new equipment in the near future.

THE TOTAL U.S. BUSINESS AIRCRAFT "FLEET"

(Includes Business and Corporate Flying)

	1983	1984
Fixed Wing		
Single Engine Piston	36,325	38,056
Twin Engine Piston	15,796	15,972
Tubroprop	4,083	4,374
Turboget Turbofan	3,642	3,694
Rotorcraft		
Piston	214	417
Turbine	1,880	1,422*
Totals	61,940	63,890
Hours Flown	11,197,044	11,408,173

*Sampling Procedure/Can Contain Statistical Error of 2.40 per Cent

Source: FAA U.S. Aircraft

Figure 12

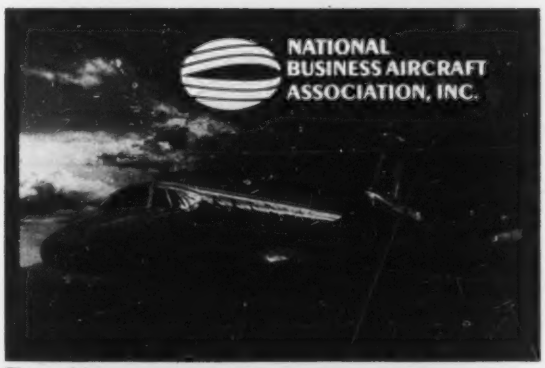

Figure 13

REDEPLOYMENT OF MANUFACTURING RESOURCES

Merders and Acquisitions

- Beech - Raytheon
- Piper - Lear Siegler
- Gulfstream - Chrysler
- Cessna - General Dynamics
- Hughes Helicopter - McDonnell Douglas
- Hughes Aircraft - General Motors
- Dornier - Daimler Benz

Consortiums, Such as

- Gates Lear Jet - Piaggio
- Saab - Fairchild

Figure 14

10 - YEAR FORECASTS

U.S.A. and World General Aviation "Fleets"

	Current ICAO	U.S.A. 1984	U.S.A. Forecast 1995	"World Forecast" 1995*
Fixed Wing				
Turboget Turbofan	4,836	4,320	6,900	7,700
Turboprop	6,286	5,809	10,900	12,000
Piston Multi-Engine	33,842	25,520	33,700	45,000
Piston Single Engine	262,454	171,922	195,600	300,000
Rotorcraft				
Turbine	5,719	4,160	8,300	11,500
Piston	7,147	2,936	2,100	5,100
Totals	320,284	214,667	257,500	381,300

*1995 World Forecast Based on Same Rate of Growth Used in U.S.A. Forecast

Figure 15

The service, replacement parts, overhaul and specialized segments of the supportive industry are in excellent condition, in many cases busier than ever before.

New elements of the service community are emerging as strong, financially sound and innovative new companies. The computer plays a particularly important role in this burgeoning portion of business aviation. Other special service sources, such as weather reporting systems which provide real time, evolving information are proliferating.

The aviation service organization segment in many cases is setting new records, though sales of aviation fuels appear in late 1985 to be lagging slightly behind the same period of last year. Fuel is available in more than adequate supply. There is no identified threat of artificial shortage on the horizon, although we are all sensitive to how incomprehensible are the politics of oil. Fuel prices remain stable with fluctuations limited to a one per cent range.

Increases in the price of new aircraft have diminished in size and frequency since 1983, a welcome trend since cumulative increases over the period from 1978 have been in the region of 80 to 100 per cent. There is no question that the price of new aircraft has been one of the principal reasons why the old reliable economic signposts were grossly out of kilter during the years of discontinuity.

While there is no one who feels he can pinpoint what the long term effects will be (**Figure 14**) a new era has begun and heavy bets are being laid on the strong belief that a period of substantial growth lies ahead for those who are innovative and aggressive. A starting point for this new era is the merger of virtually every United States-based business aircraft manufacturer with a larger entity. In most cases these mergers couple civil and military manufacturing expertise or meld airframe knowhow with electronics capabilities and experience. Consolidations give promise of providing a base broad enough to support the staggering costs of designing, developing and manufacturing new aircraft models. Note that there has been one offshore merger of significance recently.

Consortiums have also come into play, spreading risk, cost and expertise more evenly and in some cases there will be the prospect of obtaining research and development funding from foreign governments. The move toward consortium operations may prove to be the wave of the future and the pathway toward a truly internationalized aircraft manufacturing industry.

Now let us leave the past and the present behind (**Figure 15**) and examine forecasts which deal with the whole world of general aviation, as was the case with the first table. Business aircraft will be a major factor in the larger world of general aviation depicted here. The central columns show FAA's forecasts of growth in the United States fleet to the year 1995. Using the world fleet data supplied in the ICAO Bulletin article and applying the same growth rates as used by FAA, I have made a "strawman" global estimate of the general aviation fleet for the same year 1995.

These data indicate there will be a 5 per cent annual growth rate for turbojets and turbofans, a 6 per cent

increase for turboprops, a 3 per cent factor for piston twins and a 1.2 per cent increase per year for piston single engine aircraft. FAA's projections show there would be a doubling of the turbine powered rotorcraft fleet and a shrinkage of about 2.5 per cent per year in piston powered rotorcraft.

Bear in mind that the forecasts are expressed in "net" fleet terms, inclusive both of entry of newly manufactured aircraft, and of removal of a small number of aircraft which would retire from active use each year. Some shifts in primary use of aircraft will also affect the projections. Tax policy will as usual be a motivator.

I presented elements of this talk to some of our good business aviation allies in London about three weeks ago. Some of them, very knowledgeable persons, felt that the forecast data were unrealistically high and that an annual increase rate for turbine business aircraft would more likely be at about two or three per cent.

A comment on the accuracy of FAA forecasts is appropriate here. In 1977 FAA predicted that the U.S. general aviation fleet in 1984 would contain 3,800 turbojets, 5,600 turboprops, 34,100 piston multi-engine and 201,000 piston single engine aircraft. As is evident from this slide, FAA erred on the low side for the sophisticated aircraft and erred rather badly on the high side in its prediction for single engine equipment. It certainly did not foresee the relative glut of turbine equipment which would be produced from 1979 through 1982.

By my count there are currently eight manufacturers supplying business jets, with a ninth soon to join these ranks. Some of these manufacturers turn out several models. Dividing world production based on a net growth rate of five per cent per year, or at our United Kingdom and European friends' estimates of two or three per cent, implies inexorably that a shakeout lies ahead. The eight manufacturers of business-size turboprops, according to either of these forecasts, would be hard put in all cases to continue operating if the projected market were even nearly equally divided among them.

Excess aircraft produced in the recent period still have a saturating effect on the market. The industry, in effect, keeps meeting itself as it rounds each corner but there is progressively less and less encountered at each turning.

So for the short term future it seems inevitable to me that competition will be extremely keen among what is a sizeable number of manufacturers, all aiming at a limited market in the upper brackets of the business aircraft community. Compounding this sharp competition is the question of timing. Is it better to buy now from among a variety of new equipment which consists of incremental yet substantial improvements on established technology, or to await perfection of innovative and in many ways radically different technology?

One thing is clear in the roiled and turbulent waters through which the manufacturers are struggling: a stronger community will emerge from the age of discontinuity. We already see the signs. Price cutting was one of the many welcome pieces of news generated at this year's NBAA annual meeting. Plans for remanufacture of older business jets at very attractive prices was another. An air of realism pervaded that great annual forum of

business aviation. It was apparent, after three years of unanswered optimism, of hopes which did not materialize, that the industry has now made the necessary fundamental adjustments to a new age.

We know now that the 1979–1981 "high" will not return at any time in the foreseeable future. We have finally bid it farewell and almost with a sense of "good riddance" that it lies behind us.

We now look forward to new and different heights. For their part the manufacturers are becoming more aggressive and realize that companies which already own aircraft are not necessarily the only market toward which substantial sales effort should be directed. Identification of the very large body of other prospects is becoming a requisite: those thousands of companies, many of them in the new high technology and service sectors, which do not realize they are prime candidates for the unique benefits which only business aircraft can bring.

For the users' part, we must get ready to ride the crest of the wave generated by new airframe and avionics technologies. Revolutions lie ahead in better utility, better use of materials both new and traditional, containment of costs, and maintenance technique breakthroughs.

We must prepare to organize better to meet challenges and opportunities of deregulation as it enters its third stage, a stage which will be characterized by airline shakeout, consolidation and retrenchment. There will be major service lapses in airline operations, greatly increased costs to the customer and gulfs in coverage. Businesses on the move will have unprecedented need for their own aircraft.

Further, we must be prepared to adjust to new methods of organization and operation of business aircraft. Managed fleets, large and small are growing rapidly in number. "Pooled" operations and joint ownership are gathering speed. There will be more "mixed" use of aircraft under FAR Parts 91 and 135. Better control and containment of costs, along with increased utility, are the driving forces. The world of business aviation of 1995 may be a vastly changed world from that of 1985.

Above all, we must have the enthusiasm to shape our own future rather than to sit on the sidelines, passively awaiting whatever it is that fate, or the air carriers, or the legislators or the rule makers determine to be our lot.

Ralph Waldo Emerson was a paradoxical man, elusive yet assertive, introspective yet strong. But above all he was a pragmatic optimist. We need more of his kind. I began with his homely call to avoid the trap of being unwilling to look at old things in new ways. I close with the equally good advice, given not by me but by Mr. Emerson, that **(Figure 16)** nothing great was ever achieved without enthusiasm.

Thank you.

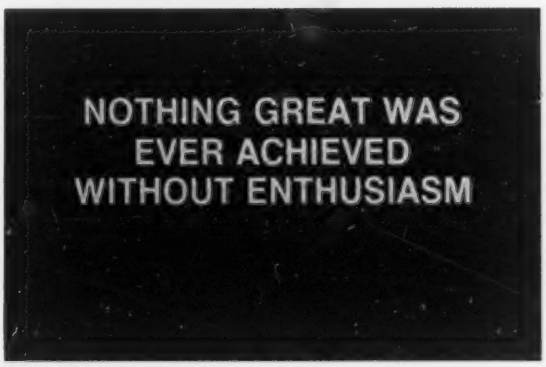

Figure 16

Distribution

Business Flying is compiled and published as a membership and public information service by the **National Business Aircraft Association**. Subjects are selected as information relevant to business aviation becomes available.

Permission is granted to reprint material from ***Business Flying*** so long as the context of the information remains intact and appropriate credit is given.

Business Flying is not available by subscription. Member companies of **NBAA** may obtain additional copies at $1.00 a section postpaid. Non-member companies and individuals may obtain additional copies at $2.00 a section postpaid.

Orders should be accompanied by check or money order made payable to **NBAA**.

There is a minimum billing charge of $10.00 to cover the cost of handling, bookkeeping and postage.

4 5M12/85

NATIONAL
BUSINESS AIRCRAFT
ASSOCIATION, INC.

1200 Eighteenth Street NW
Washington, DC 20036
202/783-9000
Telex: 904186

member of

ibac
international business
aviation council, ltd.